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NEW HAMPSHIRE COLLEGE

AGRICULTURAL EXPERIMENT STATION

CRIMSON CLOVER

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This plant is by no means new, although it is little known in New Hampshire. It has been tested by many persons on a small scale with very variable results. The main difficulty appears to be its inability to withstand our severe winters. Perhaps two thirds of those who have tried it report a complete or partial failure, while the remainder seem to be very enthusiastic over their success.

A strip sixteen rods long by one rod wide was sown on the college farm last August together with some rye for protection. It germinated nicely and before winter set in was 5½ inches high. The winter was a comparatively open one; other clover and grass lands heaved and froze out badly. Regardless of these conditions about 22 per cent. of the plot came through all right. We were unable to get a photograph of it until it was just going out of bloom, as is shown in Fig. 1. Where it did come through the winter, it looked well, stood on an average 18½ inches in height, and made a fine crop.

Crimson clover is also known as scarlet clover and Italian or German clover. It is an annual, requiring seed for each crop. The flower heads are bright crimson in color and

from 1½ to 2 inches long. The plants attain a height of from 12 to 26 inches.

TIME TO SOW

This question we are unable to answer definitely as regards New Hampshire. It is requested that all who have already grown it should inform us as to their results, that some satisfactory conclusions may be reached. The general impression is that it has not proved hardy enough to fully withstand the winters in this state. In Delaware, where 2,340 acres were sown in 1891, it is planted the latter part of July or during August. This crop may be cut for silage or hay early in May and a yield of from one to two tons per acre may be secured from very poor land. The plants from the seed sown here last August blossomed during the latter part of May. It is claimed that if it is sown in July it will make a growth by fall, which may be used for pasture during October and November, as a good substitute for hay. The remnant may be plowed under in the fall, or should it withstand the winter, may be used for soiling or green manuring the next spring.

We have sown to-day, June 29, about two acres with the idea of plowing under all but a strip, as a green manure this fall. The land is a light soil which has been exhausted in growing grass. It was plowed last December and has been thoroughly harrowed; and now if crimson clover will furnish the soil with organic matter, it will be a cheap way of fertilizing.

Another use to which crimson clover may be put is as a fertilizer in fruit plantations. It should then be sowed the latter part of July or first of August, when cultivation ceases, and later turned under. It ought to make a valuable crop for this purpose.

As a further experiment we expect to sow seed every month from now on in order to ascertain whether it will winter better at certain stages of growth than others.

SEED PER ACRE

The seed weighs sixty pounds to the bushel and from ten to sixteen pounds are necessary to seed an acre properly. It

is claimed that there are five types of crimson or scarlet clover, and that but one of these is hardy; therefore it pays to purchase from reliable seedsmen.

GREEN MANURE

Experiments have shown crimson clover to be a very valuable green manure, like all the other plants of the clover group. Those of the Delaware Experiment station go to show that from a standpoint of nitrogen alone it is more valuable for growing corn than nitrate of soda. It also has been used as a substitute for nitrate of soda with other crops with good results. In one ton of green material there are approximately 10 pounds of potash, 2⅔ pounds of phosphoric acid, and 8⅔ pounds of nitrogen.

COST OF SEED

It is subject to market changes. If purchased by the bushel (sixty pounds), the price this year averages about four dollars besides the freight rates. This practically makes the expense of seed come at one dollar an acre. For smaller quantities the prices range somewhat higher, averaging from ten to fifteen cents per pound.

CULTURE

The culture is simple as in most cases where it is used it is sown in connection with some other crops eventually to have the whole space when the latter is harvested. With corn, for example, it is sown after cultivation has ceased. It is used similarly in gardens and orchards, being only sown on the surface after cultivation. On stubble land the best results are obtained by harrowing deeply, then sowing the seed and firming or harrowing it lightly. Mr. E. W. Allen says, "Failure to secure a stand of crimson clover is frequently due sometimes to the seed and sometimes to the season." The one we can regulate while the other we can not.

EXPERIMENTS IN WESTERN NEW YORK

In a recent Bulletin (No. 117) from the Cornell University Experiment Station Prof. Bailey concludes that portion of the Bulletin under the head "Crimson Clover in Orchards" with the following paragraph:

"As the result of our experiments last season with these clovers, we will not sow any more crimson clover on any large scale until we have experimented further with it, but will try medium red, sown in our orchards about June 15 to July 20. * * But we are not yet ready to give any final opinion upon the question.

"Persons err in looking for a too heavy stand of crimson clover. It must not be expected to give the amount of herbage which the ordinary clover seeding does. Even a thin covering, if it passes the winter, is very useful in improving the conditions of the land; and a good fall stand which wholly kills out during the winter is also worth the growing upon the greater part of our fruit lands. We are convinced that crimson clover has come to stay, but we are equally convinced that it is unwise to rely upon it year by year for a cover crop. It will find its place in a judicious alternation of cover crops, the particular alternation to be determined by every farmer for himself."

GENERAL REMARKS

This crop is one worthy of our consideration and should be tried very generally, on a small scale at least. If it is of value to New Hampshire the public should know it. We intend making a thorough test of it at the Experiment Station, but as soils differ it is well to compare notes and in this way get a much more satisfactory knowledge of it. In cutting and using crimson clover for hay it should be done before it is out of blossom, as otherwise the dry, prickly heads are liable to lodge in the stomach, producing balls of felty material that in some instances have caused death to animals.

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